

JOHNSTONE'S  
*Adaptable Porous Appliances*

FOR THE  
TREATMENT OF SPINAL CURVATURES

And other Deformities,

—WITH—  
(DIRECTIONS FOR THEIR USE.)

ILLUSTRATED.

ADDRESS.

AHL'S SPLINT MANUFACTURING CO.

No. 517 LOCUST STREET, PHILADELPHIA, PA.

## SPECIAL NOTICE TO PHYSICIANS.

**T**HE great merit and value of our "Improved" Ahl's Adaptable Porous Splints, together with our recent acquisition of Orthopedic Appliances, Spinal Jackets, &c., (made from same material,) combined with the unparalleled success in their INTRODUCTION and SALE has been the cause of certain unscrupulous individuals attempting the manufacture of a Spurious Article, which they call "Ahl's Improved Splints," "Porous Felt Splints," "Poro Plastic Felt for Physicians' Use," and the like.

We therefore give notice to all Surgeons and Physicians, that the Ahl's Splints and Appliances are only manufactured and offered for sale by Ahl's Splint Manufacturing Co., of Philadelphia, and that all other articles, as heretofore stated, are an infringement on our patents, and will be diligently prosecuted according to law.

W. H. JOHNSTONE,

Manager.

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## PREFACE.

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**I***N presenting these APPLIANCES to the profession, we desire it expressly understood that we propose them only as an auxiliary to our already much credited IMPROVED AHL'S ADAPTABLE POROUS SPLINTS; at the same time we hope to materially advance that important branch of medical science, "Orthopædics," by alleviating, to a great extent, the patient's discomfort in wearing the cumbersome contrivances now in vogue.*

## SPINAL JACKETS.



These Cuts illustrate the application of one of our Porous Jackets to a very severe case of Lateral Curvature, the subject being a young lady about 18 years of age, under the treatment of Dr. Lee, of Philad'a.

## HISTORY.

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The advancement made in late years, by American surgeons, in the treatment of deformities, and especially of curvatures of the spine, demonstrates beyond a doubt that the most difficult and complicated cases can be radically cured. No better proof of this need be required than the results obtained by Drs. Benj. Lee, of Philadelphia, Lewis A. Sayre, of New York, and others who have devoted especial study and attention to this branch of surgical practice.

Dr. Lee's successful experiments in the re-introduction of Prof. Mitchell's mode of treating spinal distortions and diseases by *suspension*, reported to the American Medical Association in 1866, and his subsequent important modification, "*Self Suspension*," clinically demonstrated before the Medical Society of the State of Pennsylvania in Philadelphia, in 1870, paved the way for Dr. Sayre's brilliant discovery of the fitness and value of the plaster-of-Paris bandage as a means of fixing the curved spine in an improved position. This suggestion, which has been appropriately characterized by Prof. Post of New York as "inaugurating a new era in the management of these affections," and has given its distinguished author a world-wide reputation, furnished the realization of the *ideal treatment* of spinal *caries* proposed years before by Dr. Lee, namely, that it should be "*as nearly as possible that which we would use for a fracture of a long bone.*"

Admirable as the plaster-of-Paris dressing is, however, as a means of affording firm support to the trunk, it is open to serious objections in consequence of the nature of the material employed. Among these are its great weight; its impermeability, an insuperable obstacle at once to the aeration of the skin and the escape of its excretions, loaded as they are with effete matter; its liability to crack and scale off, or pulverize, thus proving a constant source of annoyance, as well as necessitating frequent renewal; and the impossibility of adapting it to improving and varying conditions of the form. The same objections lie against the silicate-of-soda jacket, proposed by Dr. E. H. Coover, of Harrisburg, Pa., as a substitute for and improvement upon the plaster-of-Paris jacket, although it has the advantage of being less perishable. On the other hand, we have been assured by Dr. Lee, and numerous surgeons in all parts of the country have since corroborated his opinion, that the material of which our splints are made supplies every requisite for a spinal jacket in the highest degree, and is free from the defects inherent in all other substances suggested for this purpose.

In accordance with his representations, we have, therefore, determined to fill what appears to be an absolute need of the profession, by producing the "ADAPTABLE POROUS JACKET."



This is no mere experiment, inasmuch as through the courtesy of Dr. Lee we have been able to test every step of the process of manufacture upon the living deformed subject, and we feel warranted in asserting that it has been brought to a state very nearly approaching perfection.

Dr. Lee has kindly consented to the publication of the following letter, which bears out in every particular the foregoing:—

1503 SPRUCE ST., PHILAD'A, Jan. 1st, 1879.

MR. WM. H. JOHNSTONE,

517 Locust Street, Philad'a.

*Dear Sir*:—You have requested me to furnish you with a few hints in regard to the employment of "*suspension*" in connection with the application of fixed dressings in spinal curvatures. I comply cheerfully,

First. Because experience convinces me that the qualities, on the possession of which I based my opinion *a priori* of the admirable fitness of your Adaptable Porous Felt to the purposes of a spinal jacket, do really exist; and

Secondly. Because the success of this appliance will be greatly modified by the manner in which suspension is made.

The first point on which I would insist is the importance of previous education in the use of *self-suspension*. The patient should be provided with a suspension apparatus, and should be instructed to suspend himself more or less completely three times daily: for five minutes, the first day; ten minutes, the second day; fifteen minutes, the third, and so on until he has reached half an hour. At the end of two weeks he will be able to bear the suspension necessary for the application of the plaster of Paris, or other dressing, (used in taking the cast from which you make your Porous Felt Jackets,) with comparatively little fatigue. The objects attained by this plan are two fold: First, a very considerable improvement in the form of the body and extent of the curvature is thus obtained before the cast is taken. Secondly, fatigue is diminished and fright avoided. Little children are sometimes terrified almost into convulsions by being strung up abruptly and held for a long time in that painful and alarming position, while after a few days of gentle use they will learn to look on the "*spinal swing*" as a delightful plaything.

The second point is, that in all cases of *lateral curvature*, or serious lateral deviation in posterior curvature, the hands should take hold of the rope at different levels. In the act of suspension the physician must determine by actual observation, in each case, which hand should be the higher in order to most completely redress the curves and restore symmetry to the figure.

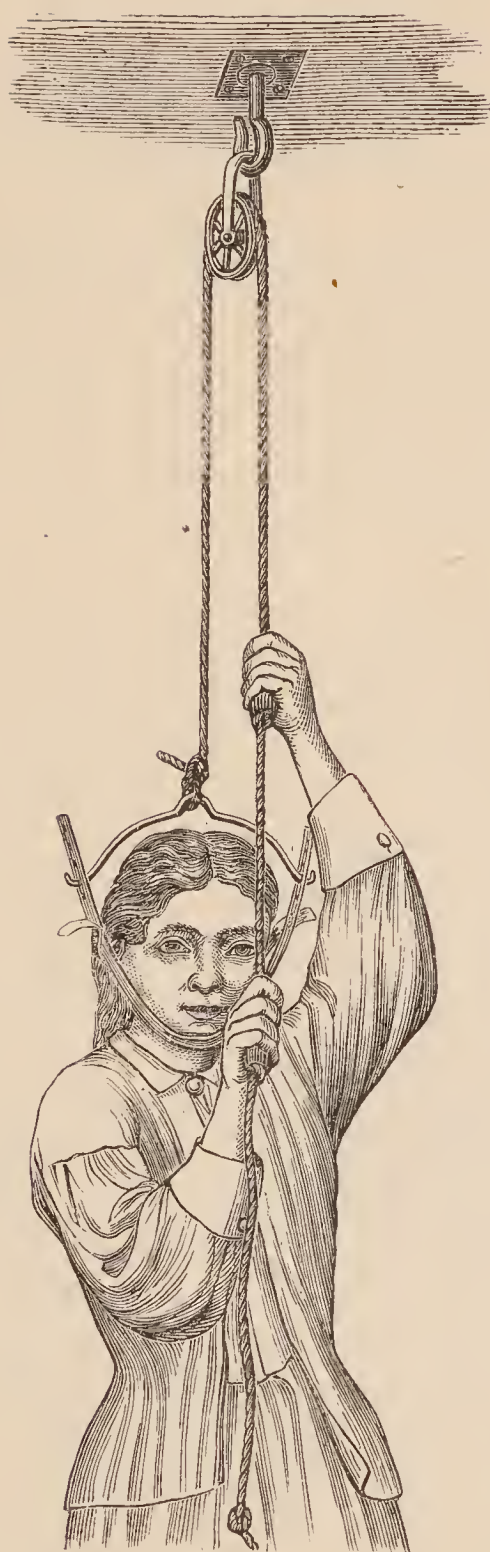
Thirdly. In suspension for the purpose of applying the dressing, there should be three points of support—the head, the axillæ and the hands—the two latter alternately relieving the former to a certain extent, but care must be taken that the axillary slings do not entirely relax the traction on the head.

Fourthly. The jacket having been removed for purpose of cleanliness, (the *only occasion* for which it should ever be removed,) it should invariably be re-applied with the patient in suspension. It can never be made to fit perfectly and, therefore, to give comfortable and complete support in any other way.

Congratulating you on the entire success of your efforts to furnish to the profession an appliance very far superior to anything heretofore within their reach for carrying out this now well-established method of treating a most difficult and painful class of diseases, I am,

Yours very truly,

BENJAMIN LEE, M. D.



Self-Suspension by Means of Dr. Lee's Spinal Swing.

## THE ADVANTAGES.

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The advantages claimed for this jacket, as a means of affording support to the trunk and spine, are:—

FIRST. It possesses all the rigidity of any other known appliance used for the purpose, rendering a firm yet equable support to all parts covered by it.

SECOND. Being adaptable, it conforms itself perfectly to the contour of the body, thereby rendering impossible sloughing or chafing from inequalities of pressure.

THIRD. Its porosity is one of its most admirable features. It is freely permeable by atmospheric air and cannot interfere with the natural and free transpiration of the skin. Bodily exhalations are not confined by it, but pass freely off—a sanitary qualification which will be fully appreciated, without further comment. No disagreeable odor is acquired, as months of continued wear has proven, even in the hottest weather.

FOURTH. Its adjustability, owing to the system of lacing, (similar to a corset,) by means of which the jacket can be removed and replaced at will, for purposes of cleanliness and physical exercise—two very great essentials in the successful treatment of these diseases. By means of the laces, also, the pressure can always be kept the same, as the disease yields to the treatment without removing the jacket.

FIFTH. Its economy. In all respects it is the cheapest and most economical form of support ever offered. The jacket cannot wear out, can be changed in form by heat, at any time and as often as desired, and by paring with a knife, can be made smaller at will.

SIXTH. Being light, it is easily worn. It weighs but a few ounces.

We do not confine ourselves to Spinal Jackets, but make splints of any shape or form for any possible deformity of the human body. Many deformities thought by surgeons incurable, with these most comfortable appliances, can be rectified entirely.

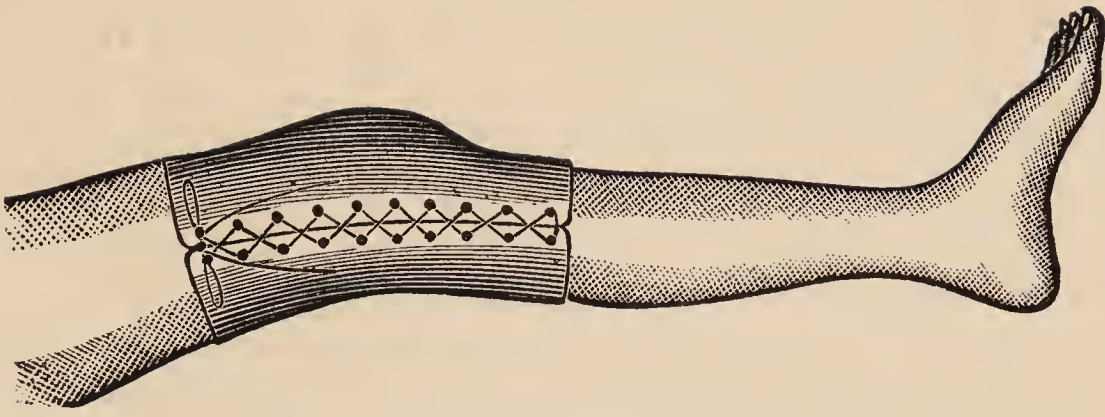
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## MODE OF ORDERING.

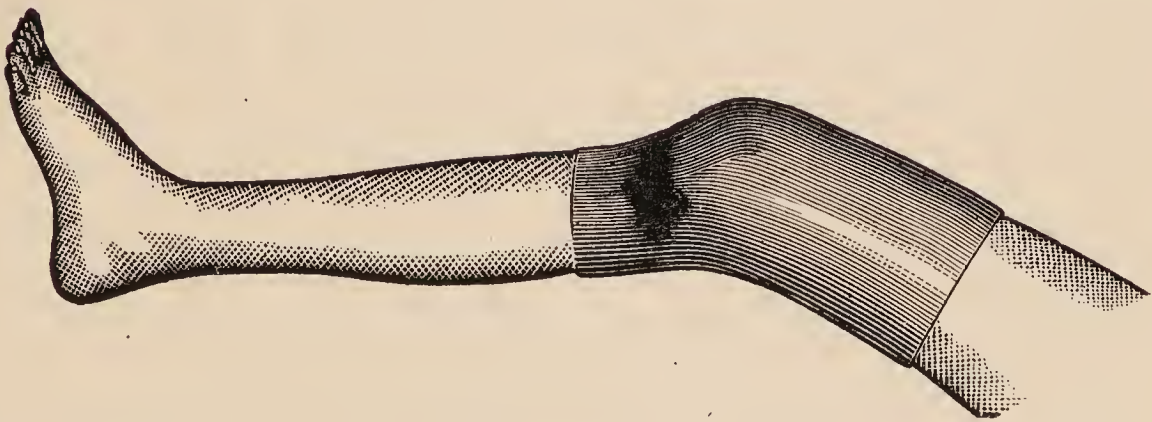
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When at any time the *patrons* of the *Improved Adaptable Porous Splints*, having cases of deformity, desire us to make an appliance for its relief, the following instructions should be closely adhered to: All that we require is a *perfect cast* of the deformed part, whether trunk or extremity, and this may be most readily obtained in the manner herein prescribed.





Our Appliances as applied to a living subject under treatment  
at the great Sanitarium at Battle Creek, Michigan.



Representing Appliances for Special Deformity.

### FOR SPINAL CURVATURES.

Suspension unquestionably places the trunk and spine in the most favorable position for recovery. Dr. Lee's *spinal swing*, which may be made by any blacksmith and screwed up over a door way, or to a joist in the ceiling, is the cheapest and simplest apparatus for this purpose. It will be found described in the *Transactions of the American Medical Association*, vol. xxviii. The same essay can be obtained separately by addressing Dr. D. G. Brinton, office *Medical and Surgical Reporter*, 115 South 7th Street, Philadelphia. The patient being suspended, and wearing a tight-fitting woven under-shirt, a *roller* soaked in plaster-of-Paris, silicate-of-soda, paraffine, starch, glue or other similar material, is now to be rapidly and smoothly passed around the trunk and re-inforced with upright strips of tin, as detailed in Prof. Sayre's admirable "Report" in the *Transactions of the American Medical Association*, vol. xxvii. Two or, at most, three thicknesses of bandage will be sufficient. It should be carried from the level of the pubes to somewhat above that of the axillæ. Care should be taken to adapt it accurately to every inequality of the surface.

The patient should be suspended at intervals, while the dressing is setting, and when not suspended should lie flat on the back. As soon as the bandage is firm, it should be cut perfectly straight up the middle of the front with a pair of stout shears, or a sharp pen-knife, protected by a grooved director, (or by a strip of tin previously inserted for the purpose,) and then carefully opened and removed.

If for any cause, as lack of time or material, the head sling cannot be used, the patient should reach up with the hands to a bar, the top of a door, round of a ladder, or other such firm hold-fast, and maintain himself in as complete extension as possible by that means.

### FOR DEFORMITIES OF THE EXTREMITIES.

Place the patient on the back on a firm surface, and bring the part as nearly as possible into its natural shape and position, and maintain so while applying the bandage and until it is set. Cut the bandage along such line as will admit of its removal with the least alteration of shape.

Any cast weighing less than four pounds will come much cheaper by mail, but great care must be taken in packing, either by mail or express. From this cast we can make a perfect-fitting *Jacket* or other appliance.

It must be obvious to the *surgeon* that the treatment of distortional diseases, and particularly those dwelt upon at length in this pamphlet, may now come under the mastery of those who heretofore had not thought of undertaking it, from the simple want of anything approaching perfection in the appliances necessary. With our Adaptable Porous material, made into *any* desired form, at his command, and following the suggestions hereinbefore set down for obtaining it, he can fearlessly enter upon the practice of "*orthopædics*," with an almost certain guarantee of success and consequent amelioration to numberless sufferers.





